



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,094	02/26/2002	Shinichi Ogimoto	219970US3	2673
22850	7590	02/09/2006		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER NGUYEN, DONGHAI D	
			ART UNIT	PAPER NUMBER
			3729	

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/082,094	Applicant(s) OGIMOTO, SHINICHI	
	Examiner Donghai D. Nguyen	Art Unit 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-7, 15, 16 and 19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 15, 16 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 14 November 2005 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-7, 15-16 and 19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not described "the vacuum chucking part holds the electronic component at a position which covers straight lines substantially parallel to edges of the electronic component respectively" (claim 1, lines 12-14; claim 15, lines 27-28; and claim 19, lines 23-24). Figs. 12-14 and 19 show the vacuum chucking part holds the electronic component at a position which is on straight lines substantially parallel to edges of the electronic component and the vacuum chucking part partially covered the electronic.

Art Unit: 3729

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

5. Claims 1-7, 15-16 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear as to how the vacuum chucking part holds the electronic component at a position which covers straight lines substantially parallel to edges of the electronic component respectively as specified in claim 1, lines 12-14; claim 15, lines 27-28; and claim 19, lines 23-24, and whether all or only part of the component is covered.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) The invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

7. Claims 1, 15 and 19 are rejected under 35 U.S.C. 102(a) as being anticipated by AAPA.

Regarding claim 1, AAPA discloses an electronic component holding head (81) for holding an electronic component (9) to be mounted to a substrate (2), comprising: a main electronic component holding unit (81, 82, 82a, etc.); a vacuum chucking part (81a-c) provided on said main electronic component holding unit so as to face the surface of the electronic component to be held by vacuum chucking, so that the electronic component is held by vacuum chucking to said main electronic component holding unit (transport arm 83 Fig. 4); and a light

path part (87) provided in the main component holding unit (83), the light path part configured to guide light shined onto a positioning mark (91b) formed in a terminal part (91a) of the electronic component (9) to correcting a position offset between the electronic component and a substrate to which the electronic component is to be mounted (Fig. 5), wherein said vacuum chucking part (81) holds the electronic component at a position which is on/covers straight lines substantially parallel to edges of the electronic component respectively (Fig. 5) and substantially mutually orthogonal to the positioning mark of the electronic component, said vacuum chucking part being located in the vicinity of the position mark and avoiding the positioning mark (Fig. 4 note that the light ray, arrow, comes from light source 88 is parallel to the edge of the electrical component).

Regarding claims 15 and 19, AAPA discloses an electronic component mounting apparatus and method for mounting an electronic component onto a substrate, comprising: an electronic component feeding unit, which feeds an electronic component (85); an electronic component holding head (81), which holds the electronic component to be mounted onto a substrate; an imaging unit (87), which forms an image of a positioning mark formed at a terminal part of the electronic component held by said electronic component holding head, for correcting a position offset between the electronic component and the substrate to which the electronic component is to be mounted; a position offset detection unit (86), which detects a position offset of the electronic component relative to the substrate, based on image data of the positioning mark obtained by said imaging unit; a position correction unit (83, 89) which, based on the position offset detected by said position offset detection unit, performs control so as to correct the X direction and the Y direction position offset of the electronic component relative to the substrate,

so that the electronic component with the thus corrected position offset is mounted to the substrate, wherein said electronic component holding head includes: a main electronic component holding unit (transport arm 83, see Fig. 4); a vacuum chucking part (81a-c) provided on said main electronic component holding unit so as to face the surface of the electronic component to be held by vacuum chucking, so that the electronic component is held by vacuum chucking (Fig. 6) to said main electronic component holding unit and a light path part (87) provided in the main component holding unit (83), the light path part being configured to guide light shined onto the positioning mark (91a) formed in a terminal part (91) of the electronic component to correcting a position offset between the electronic component and the substrate to which the electronic component is to be mounted (Fig. 5), wherein said vacuum chucking part holds the electronic component at a position which is on/covers straight lines substantially parallel to edges of the electronic component respectively(see Fig. 5) and substantially mutually orthogonal over the positioning mark of the electronic component, and said vacuum chucking part being located in a vicinity of the position mark and avoiding the positioning mark (Fig. 4).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 2 as best understood is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of US Patent 6,203,082 to Bendat et al.

AAPA disclose a light source shines light toward the positioning mark formed on the electronic component held by said vacuum chucking part, via said light path part, except the light source provided on said main electronic component holding head. Bendat et al teaches the light source (Col. 1, lines 63-64) provides on the holding head (10) for picking up and accurately placing a device (Col. 2, lines 2-3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify AAPA to have the light source provided on the holding head as taught by Bendat et al for picking up and accurately placing the work piece.

Allowable Subject Matter

10. Claims 3-7 and 16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

11. Applicant's arguments filed on 14 November 2005 have been fully considered but they are not persuasive.

a) The amendment to claims 1, 15, and 19, which raise issues of 112 first and second paragraph rejection (see Items 2-5 above).

b) Applicant argues that the references fail to show the vacuum chucking hole that being arranged and covered the edges of the component, etc. argue in the "Remarks" page 13, 3rd and 4th paragraphs. It is noted that the above feature upon which applicant relies (i.e., the vacuum chucking holes are arranged at a position which covers straight lines substantially parallel to

Art Unit: 3729

edges of the electronic component respectively and substantially mutually orthogonal on or over the positioning marks of the electronic component, the vacuum chucking holes being located in the vicinity of the positioning marks and avoiding the positioning marks or lines A and B running on the position marks) are not recited in the rejected claim(s). Although Applicant should be aware that the claims are interpreted in light of the specification, limitations from the specification are not to be read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, regarding the chucking hole and its configurations requirement with respect to the component i.e., the chucking that holds the component at position which covers straight lines in parallel to edges of the component appears to be incorrect. At best the chucking part, which holds the component and covers at least partial top surface of the component during the placing process.

c) Applicant argues that the prior art does not teach the vacuum chucking part are arranged at a position which covers straight lines substantially mutually orthogonal to the positioning mark. The Examiner refers Applicant to Figs. 6 and 7 that show the straight lines (sides of the chucking part) are perpendicular to the component/mark 91b. Also, the invention directed to a device but not the operations of the device and its association outside structure element such as component.

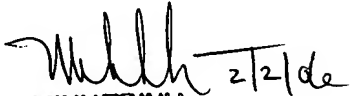
Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donghai D. Nguyen whose telephone number is (571)-272-4566. The examiner can normally be reached on Monday-Friday (9:00-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter D. Vo can be reached on (571)-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DN
February 1, 1006


MINH TRINH
PRIMARY EXAMINER